UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,667	02/11/2005	Manuel Richey	H0004201US-1462	1472

7590 06/11/2007

Deborah Chess
Honeywell International Inc
101 Columbia Road
Morristown, NJ 07962

EXAMINER	
LEVI, DAMEON E	

ART UNIT	PAPER NUMBER
2841	

MAIL DATE	DELIVERY MODE
06/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/524,667	RICHEY ET AL.	
	Examiner	Art Unit	
	Dameon E. Levi	2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05/11/2007(RCE)*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10 and 12-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,12-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, Applicant's submission filed on 05/11/2007 has been entered and an Official Action follows herein below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3-5, 7-10 and 12-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Mazurkiewicz US Patent 6600101.

Regarding claim 1, Mazurkiewicz discloses applying a non-conductive coating (element 102, Figs 1-15B) over said electrical component (element 204,850, Figs 1-15B); and applying a conductive coating (element, 104 Figs 1-15B) over said non-conductive coating and in contact with said grounding point (element 601, Figs 1-15B) so as to ground said conductive coating and thereby reduce electromagnetic emissions from said electronic circuit.

Regarding claim 3, Mazurkiewicz discloses wherein applying the non-conductive coating comprises applying the non-conductive (element 104, Figs 1-15B) coating on a central portion of the electronic circuit (element 202, Figs 1-15B) where the at least one electrical component is disposed but not on an edge portion (Figs 6B) of the electronic circuit where the at least one grounding point is disposed;

and wherein applying the conductive coating(element 104, Figs 1-15B) comprises applying the conductive coating on the central portion of the electronic circuit to contact the non-conductive coating and applying the conductive coating on the edge portion of the electronic circuit to contact the at least one grounding point(element 601, Figs 1-15B).

Regarding claim 4, Mazurkiewicz discloses wherein applying the non conductive coating comprises conforming the non-conductive coating(element 102, Figs 1-15B) to a top surface of the at least one electrical component(element 204,850, Figs 1-15B), and wherein applying the conductive coating (element 104, Figs 1-15B) comprises conforming the conductive coating to a top surface of the non-conductive coating(element 102, Figs 1-15B) and to a top surface of the grounding point(element 601, Figs 1-15B).

Regarding claim 5, Mazurkiewicz discloses an electric device comprising:

a printed circuit board(element 202, Figs 1-15B);

circuit traces disposed on a surface of the printed circuit board(element 322, Figs 1-15B)

an electrical component(element 204,850, Figs 1-15B) mounted on the surface of the printed circuit board(element 202, Figs 1-15B), the electrical component electrically connected to the circuit trace by a conductive element;

a grounding pad(element 601, Figs 1-15B) disposed along a perimeter of the printed circuit board;

a non-conductive coating(element 102, Figs 1-15B)disposed over the electrical component; the non conductive coating conforming to a profile of the electrical component and having a substantially uniform thickness(element 102, Figs 1-15B) and a conductive coating (element 104, Figs 1-15B)disposed on the non-conductive coating and on the grounding pad(element 601, Figs 1-15B), the conductive coating contiguous with at least a portion of the at least one grounding pad.

Regarding claim 7, Mazurkiewicz discloses the electronic circuit(element 202, Figs 1-15B), having a central region and a peripheral region, a boundary between the central region and the peripheral region defined by an outermost edge of the non-conductive coating, the at least one grounding pad(element 601, Figs 1-15B), disposed at least partially within the peripheral region.

Regarding claim 8, Mazurkiewicz discloses the conductive coating(element 104, Figs 1-15B), conforming to a profile of the non-conductive coating(element 102, Figs 1-15B), and a profile of the grounding pad(element 601, Figs 1-15B).

Regarding claim 9, Mazurkiewicz discloses wherein the non-conductive coating comprises a material selected from the group consisting of insulating tape, rubber,

silicone, room-temperature vulcanizing silicone rubber, insulating varnish, and combinations thereof(column 8, lines 15-25).

Regarding claim 10, Mazurkiewicz discloses wherein the conductive coating comprises a material selected from the group consisting of conductive paint, silver paint, and combinations thereof(column 16, lines 20-30).

Regarding claim 12, Mazurkiewicz discloses the grounding pad(element 601, Figs 1-15B), disposed entirely within the peripheral region.

Regarding claim 13, Mazurkiewicz discloses wherein applying the non-conductive coating over the electrical component comprises applying the non-conductive coating(element 102, Figs 1-15B) to a top surface of the electrical component(element 204,850, Figs 1-15B), wherein applying the conductive coating (element 104, Figs 1-15B) over the non-conductive coating(element 102, Figs 1-15B) and in contact with the grounding point (element 601, Figs 1-15B) comprises applying the conductive coating(element 104, Figs 1-15B) to a top surface of the non-conductive coating (element 102, Figs 1-15B) and to a top surface of the grounding point(element 601, Figs 1-15B), and wherein applying the conductive coating occurs after applying the non-conductive coating(element 104,102 Figs 1-15B).

Regarding claim 14, Mazurkiewicz discloses wherein applying the non-conductive coating comprises applying the non-conductive coating(element 102, Figs 1-15B) such that the non-conductive coating exposes at least a portion of an upper surface of the grounding point(element 601, Figs 1-15B).

Regarding claim 15, Mazurkiewicz discloses wherein applying the conductive coating comprises applying the conductive coating(element 104, Figs 1-15B) such that the conductive coating is contiguous with at least a portion of the at least one grounding point(element 601, Figs 1-15B).

Regarding claim 16, Mazurkiewicz discloses a device comprising:

a circuit board (element 202, Figs 1-15B), having a peripheral region and a central region; electrical components(element 204,850, Figs 1-15B), disposed within the central region of the circuit board;

a grounding pad (elements 5, Figs 1-3)disposed within the peripheral region of the circuit board;

a non-conductive coating (element 102, Figs 1-15B), disposed on at least one of the electrical components, the non conductive coating having a substantially uniform thickness; and

a conductive coating(element 104, Figs 1-15B), disposed on the non-conductive coating (element 102, Figs 1-15B), and disposed on the at least one grounding pad(element 601, Figs 1-15B), the conductive coating contiguous with at least a first portion of an upper surface of the grounding pad(element 601, Figs 1-15B), the conductive coating conforming to a profile of the electrical components(element 204, 850,Figs 1-15B),.

Regarding claim 17, Mazurkiewicz discloses wherein the peripheral region surrounds the central region(see element 202, Figs 1-15B).

Regarding claim 18, Mazurkiewicz discloses wherein the non-conductive coating(element 102, Figs 1-15B), is contiguous with a second portion of the upper surface of the at least one grounding pad(element 601, Figs 1-15B), the first portion and the second portion constituting an entirety of the upper surface of the at least one grounding pad(element 601, Figs 1-15B).

Regarding claim 19, Mazurkiewicz discloses wherein the non-conductive coating(element 102, Figs 1-15B), is disposed on a first portion of the central region, the first portion less than an entirety of the central region.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mazurkiewicz US Patent 6600101 in view of Murakami et al US Patent 5981043.

Regarding claim 2, Mazurkiewicz discloses the instant claimed invention except further comprising, prior to applying the conductive coating, opening a hole in the non-conductive coating above the at least one grounding point to enable contact between the conductive coating and the at least one grounding point.

Murakami et al discloses, opening a hole (element 25, Fig 3) in the non-conductive coating above the at least one grounding point (element 23, Fig 3) to enable contact between the conductive coating and the at least one grounding point.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have opened the hole in the manner as taught by Murakami et al in the assembly of Mazurkiewicz so as to enable grounding performance on both sides of the circuit board via the through hole.

Regarding claim 6, Mazurkiewicz discloses the instant claimed invention except the non-conductive coating having an opening disposed above the portion of the grounding pad, the conductive coating physically touching the portion of the at least one grounding pad through the opening.

Murakami et al discloses, opening a hole in the non-conductive coating above the at least one grounding point (element 23, Fig 3) to enable contact between the conductive coating and the at least one grounding point.

non-conductive coating having an opening(element 25, Fig 3) disposed above the portion of the grounding pad(element 23, Fig 3), the conductive coating physically touching the portion of the at least one grounding pad through the opening.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included an opening in the manner as taught by Murakami et al in the assembly of Mazurkiewicz so as to enable grounding performance on both sides of the circuit board via the opening.

Response to Arguments

Applicant's arguments with respect to claims 1-10, and 12-19 have been considered but are moot in view of the new ground(s) of rejection presented in the Request for Continued Examination.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6849800, US 6743975.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dameon E. Levi whose telephone number is (571) 272-2105. The examiner can normally be reached on Mon.-Thurs. (9:00 - 5:00) IFP, Fridays Telework.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dameon E Levi
Examiner
Art Unit 2841

DEL

DEAN A. REICHARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

6/6/07